

**REMARKS**

Claims 7-17 are pending. By this amendment, Claims 1-6 are canceled without prejudice or disclaimer, and Claims 7-17 are newly presented to more clearly recite the invention. Applicants respectfully submit no new material is presented herein.

Claims 7-8 correspond to previously pending Claims 1-2; Claims 9-11 correspond to previously pending Claim 3; Claims 12-14 correspond to previously pending Claim 4; and Claims 15-16 correspond to previously pending Claims 5-6. As such, Applicants respectfully request entry of the Amendment.

**Claims Rejected—35 U.S.C. § 102 and 35 U.S.C. § 103**

Claims 1-3 and 5-6 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,882,772 to Lowery et al. ("Lowery"). Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Lowery in view of U.S. Patent No. 6,735,391 to Lee et al. ("Lee"). To the extent the rejection remains applicable to the claims, as amended, Applicants respectfully traverse the rejection.

As explained above, Claim 7 corresponds to previously pending Claim 1. Claim 7 recites a multiple delay line including, among other features, an arrayed waveguide grating having a plurality of input ports and a plurality of output ports and a plurality of sections of a dispersive optical medium forming feedback lines between one of the group consisting of one of the input ports and one of the output ports, two different input ports, the same input port, two different output ports, and the same output port, wherein a different delay is introduced for each wavelength in an optical carrier according to the free spectral range of the array waveguide grating and wherein the different delays are obtained by dispersion occurring in the plurality of sections of the dispersive optical medium.

Lowery discloses an optical device (2) having a number of waveguides (12), an input port (6) coupled to the waveguides (12) such that light incident on the input port (6) is split for propagation on the waveguides, and an output port (10) receiving light propagated on the waveguides (12) at a point on an output plane of incidence. The waveguides (12) induce respective delays in the propagated light to induce a wavelength dependent group delay. Delays between adjacent waveguides are chosen to be non-constant, to introduce quadratic, cubic or higher-order phase differences between different waveguides.

Light on an input line (4) passes to the coupler (6), which is a free-propagation or multi-mode propagation region that acts as a star coupler, and uses the light received from the input line (4) to excite the waveguides (12). For a given input line (4), the coupler (6) splits the light traveling along the input line (4) amongst all of the waveguides or delay lines (12). The waveguides (12) have different lengths to introduce characteristic delays or dispersion in the light signals propagated therethrough.

Lee teaches an automatic retrieval method of a wavelength-division multiplexed (WDM) ring network to the normal state after recovery of a failure.

However, Lowery and Lee, either alone or in combination, do not disclose or suggest each and every feature recited in Claim 7. As described above and as recited in column 3, lines 18-34 of Lowery, the waveguides (12) induce respective delays in the propagated light to induce a wavelength dependent group delay. The shorter delay lines (12) introduce a smaller amount of delay or dispersion, whereas the longer delay lines (12) introduce a larger amount of delay or dispersion to the light traveling respectively therealong. Therefore, the delay lines (12) of Lowery introduce delays to

the wavelengths. Consequently, Lowery does **not** disclose or suggest a different delay introduced for each wavelength in an optical carrier, wherein the different delays are obtained by dispersion occurring in the plurality of sections of the dispersive optical medium, as recited in Claim 7.

Moreover, contrary to the Office Action's assertion, column 6, lines 6-13 of Lowery does **not** disclose "delays being obtained due to the dispersion of the sections of the dispersive optical medium of the feedbacks." See page 2, third paragraph of the Office Action. Rather, column 6, lines 6-13 of Lowery merely discloses feeding a first output back to a second input and feeding a second output back into a third input. The "N times" dispersion compensation provided by such a feedback is produced by the delay lines (12), as explained above, not by any structure forming the feedback described in column 6, lines 6-13.

Further, Lee does not make up for the deficiencies of Lowery. Lee also does not teach or suggest a different delay introduced for each wavelength in an optical carrier, wherein the different delays are obtained by dispersion occurring in the plurality of sections of the dispersive optical medium, as recited in Claim 7.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. See M.P.E.P. § 2131. To establish *prima facie* obviousness of a claimed invention, all the claim features must be taught or suggested by the prior art. M.P.E.P. § 2143.03. For at least the reasons explained above, Lowery and Lee, either alone or in combination, do not disclose or suggest each and every feature recited in Claim 7. Accordingly, Applicants respectfully submit Claim 7 is not anticipated or rendered obvious in view of Lowery and Lee and should be deemed allowable.

Claims 8-16 depend directly or indirectly from Claim 7 and, as such, incorporate each and every feature recited therein. Therefore, Applicants respectfully submit that Claim 8-16 should be deemed allowable for at least the same reasons Claim 7 is allowable, as well as for the additional subject matter recited therein.

Accordingly, Applicant respectfully requests withdrawal of the rejection.

**Conclusion**

In view of the foregoing, reconsideration of the application, withdrawal of the outstanding rejections, allowance of Claims 7-17, and the prompt issuance of a Notice of Allowability are respectfully solicited.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 027318-00003.**

Respectfully submitted,  
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Enclosures: Petition for Extension of Time  
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